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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,289	12/20/2001	Ichiro Bekku	930011-2028	1810

20999 7590 11/24/2003

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EXAMINER

THORNTON, YVETTE C

ART UNIT PAPER NUMBER

1752

DATE MAILED: 11/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/027,289

Applicant(s)

BEKKU ET AL.

Examiner

Yvette C. Thornton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 6-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☒ Certified copies of the priority documents have been received in Application No. 09/548952.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other:

### DETAILED ACTION

This is written in reference to application number 10/027289 filed on December 20, 2001, which is a continuation of application number 09/548,952, now US, Patent No. 6,413,693.

#### *Response to Amendment*

1. Claims 1-3 and 6-8 are currently pending.

#### **Claim Rejections - 35 USC § 103**

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yukinobu (US 5,411,792 A) in view of the applicant's own disclosure. Yukinobu teaches a transparent conductive substrate comprising a transparent overcoat layer formed on a base plate member and a transparent conductive film, which is formed on the overcoat layer. The said conductive film contains ultra-fine particles of indium-tin oxide (see abstract). Yukinobu teaches a method wherein a base board is coated with a coating layer and an overcoat layer and bonded to a light transmitting base plate member using an overcoat liquid and/or a bonding agent. The baseboard is then peeled from the base plate member. The baseboard can be selected from a glass plate, a metal plate, a ceramic plate, etc (c. 3, l. 54-56).

Specifically embodiment fourteen exemplifies a method of forming a transparent conductive substrate comprising (1) coated a polyimide vanish onto a soda-lime glass plate; (2) forming a

transparent conductive film by applying a coating of ultra-fine ITO particles and a thermosetting resin binder, drying and calcinating the said coating; (3) then coating the overcoat liquid 3 containing the UV setting resin; and (4) bonding the form element to a PET film selected as the base plate (c. 12, l. 20-42 and c. 10, l. 45-65). Yukinobu teaches that since the adhesion between the baseboard and the polyimide film is weak, the polyimide layer is peeled off from the interface. It is the examiner's position that the taught glass plate meets the limitation of a glass substrate, which is superior in heat resistance to the plastic material. The PET base plate meets the limitation of a plastic material. The polyimide film constitutes a peelable film while the taught overcoat layer meets the limitation of a protective film made of an organic resin. Yukinobu teaches that the transparent conductive film has a specific resistance of  $5 \times 10^{-2} \Omega \cdot \text{cm}$  or lower (c. 2, l. 27-31). It is the examiner's position that ITO would inherently have a specific resistance of  $3.0 \times 10^{-4} \Omega \cdot \text{cm}$  or lower when the substrate is heated to a temperature of 150 degrees C or higher. This position is based on the applicant's own disclosure when teaches ITO as a preferred material for the claimed conductive layer (spec. pg. 2, l. 1-7 and pg. 8, l. 1-12).

Embodiment fourteen of the said reference however fails to explicitly discuss the use of an adhesive layer formed on the taught overcoat layer. Yukinobu teaches a method wherein a base board is coated with a coating layer and an overcoat layer and bonded to a light transmitting base plate member using an overcoat liquid and/or a bonding agent. The baseboard is then peeled from the base plate member (c. 2, l. 62-c. 3, l. 15). It is the examiner's position that would have been obvious to one of ordinary skill in the art in light of

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such a teaching, to use a bonding agent to affix the base plate member to the overcoat layer.

The said bonding agent constitutes an adhesive layer as claimed by the applicant.

Yukinobu also fails to teach that the transparent conductive ink is applied to the based by methods such as wire bar coating, the doctor blade coating method, the roller coating method or a similar method (c. 4, l. 3-19). However, the background teachings of Yukinobu disclose that it is well known in the art to form films of oxides such as ITO by sputtering method or by the CVD method (c. 1, l. 13-16). One of ordinary skill in the art would have been motivated to use the conventional methods of sputtering and CVD to apply the taught transparent conductive ink with the expectation that the said methods would require expensive equipment and can not provide high productivity or high yield.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yukinobu (US 5411792 A) in view of applicant's own disclosure as applied to claims 1-3 and 7 above, and further in view of Sato et al. (US 5155005 A).

Yukinobu, as discussed above, teaches all the limitations of the instant claims except the presence of a color filter layer formed on the protective film as set forth in instant claim

6. Yukinobu teaches that the taught invention is related to a transparent conductive substrate, which is to be used as a transparent electrode, or the like for touch panels, liquid crystal display devices, electroluminescent display elements etc., (c. 1, l. 5-11). It is the examiner's position that it is well-known and conventional in the art of liquid crystal display manufacturing that the structure of a liquid crystal color displayer (LCD) comprises a color filter, a protective film and a clear electrode in the at order. This position is based on the teachings of Sato which discloses that generally, the structure of a color LCD first multilayer

construction comprising a first multilayer construction having provided on a transparent substrate such as a glass plate and laminated in the following order, a color filter, a protective film, a clear electrode, an insulating film and an orientation film (c. 1, l. 11-33). It would have been obvious to one of ordinary skill in the art, as it is well known and supported by Sato, to incorporate a color filter between the taught base plate having a bonding agent and overcoat layer of Yukinobu in order to make the taught element capable of being used in liquid crystal display devices.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yukinobu (US 5411792 A) in view of applicant's own disclosure as applied to claims 1-3 and 7 above, and further in view of Oka (US 5,747,152 A). Yukinobu, as discussed above, exemplifies the use of thermo-setting and UV-setting resins as suitable overcoat liquids (c. 7, l. 45-61).

Yokinobu however fails to teach a hardness value for the said overcoat liquids. It is the examiner's position that after the taught heating step of Yokinobu, the taught resins form a fully crosslinked layer. One of ordinary skill in the art would expect that hardened resin layer would inherently have a hardness of H or more. This position is supported by the teachings of Oka ('152), which teaches a hard coat layer comprising a binder resin (i.e., thermosetting resin, etc). Oka teaches that in order to impart a hard property the thickness of the hard coat layer is not less than 0.5  $\mu\text{m}$  and has a hardness not less than H as measured by JIS K5400 (c. 13, l. 22-34).

#### *Response to Arguments*

6. Applicant's arguments filed September 22, 2003 have been fully considered but they are not persuasive. Applicants argue that the 103 rejection of record relies upon applicant's

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own disclosure for motivation. The examiner respectfully disagrees. Applicants note that the expectation of success must be found in the prior art and not the Applicant's disclosure. The prior art reference of Yukinobu (US 5411792 A) clearly teaches the use of ITO particles in forming a transparent conductive film. Yukinobu teaches that the transparent conductive film has a specific resistance of  $5 \times 10^{-2} \Omega \cdot \text{cm}$  or lower (c. 2, l. 27-31). It is the examiner's position that ITO would inherently have a specific resistance of  $3.0 \times 10^{-4} \Omega \cdot \text{cm}$  or lower when the substrate is heated to a temperature of 150° degrees C or higher. This position is supported by the applicant's disclosure when teaches ITO as a preferred material for the claimed conductive layer (spec. pg. 2, l. 1-7 and pg. 8, l. 1-12). The claims as written do not teach a heating nor does it require a heating step to be performed. Therefore the material is only required to be *capable* of having a specific resistance of  $3.0 \times 10^{-4} \Omega \cdot \text{cm}$  or lower when heated. The examiner maintains the position that the ITO film of Yukinobu would inherently have a specific resistance of  $3.0 \times 10^{-4} \Omega \cdot \text{cm}$  or lower when the substrate is heated to a temperature of 150 degrees C or higher. This position is supported by the applicant's own disclosure when teaches ITO as a preferred material for the claimed conductive layer (spec. pg. 2, l. 1-7 and pg. 8, l. 1-12). Furthermore, applicants have failed to provide evidence that an ITO material in combination with a binder would not inherently meet the claim limitations.

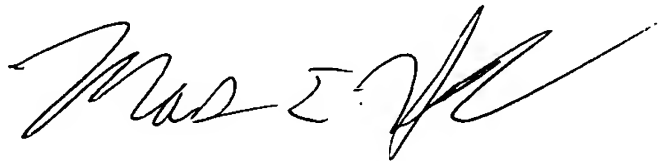
7. The examiner maintains the position of record.

### ***Conclusion***


**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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8. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 703-305-0589. The examiner can normally be reached on Monday-Thursday 8-6:30.
10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on 703-308-2464. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.
11. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1495.



MARK F. HUFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

yct   
November 18, 2003